



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,217	01/02/2002	Robert Allan Unger	SNY-R4646.01	8614
24337	7590	06/28/2006	EXAMINER	
MILLER PATENT SERVICES 2500 DOCKERY LANE RALEIGH, NC 27606			MOORTHY, ARAVIND K	
			ART UNIT	PAPER NUMBER
			2131	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/038,217	Applicant(s) UNGER ET AL.	
	Examiner Aravind K. Moorthy	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-178 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-178 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is in response to the communications filed on 25 April 2006.
2. Claims 1-178 are pending in the application.
3. Claims 1-178 have been rejected.

Information Disclosure Statement

4. The examiner has considered the information disclosure statement filed on 3/25/2002, 5/7/2002, 10/3/2002, 4/7/2003, 5/21/2003, 1/30/2004, 11/3/2004, 3/15/2005, 6/2/2005, 7/29/2005, 10/28/2005, 1/30/2006 and 4/25/2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1-6, 9-23, 26-36, 40, 41, 44, 45, 48-51, 54-59, 62-70, 73-79, 82-94, 97-108, 111-119, 121, 122, 125-155, 157-162, 165-170 and 173-178 are rejected under 35 U.S.C. 102(e) as being anticipated by Hoffman U.S. Patent No. 6,324,288 B1.**

As to claim 1, Hoffman discloses a method of encrypting a digital television signal, comprising:

examining unencrypted packets of data in the digital television signal to
identify a packet type [column 4 line 40 to column 6 line 57];

duplicating packets identified as being of the packet type to create first and second duplicate packets [column 4 line 40 to column 6 line 57];

encrypting the first duplicate packets according to a first encryption method to create first encrypted packets [column 4 line 40 to column 6 line 57];

encrypting the second duplicate packets according to a second encryption method to create second encrypted packets [column 4 line 40 to column 6 line 57]; and

replacing the unencrypted packets of the packet type with the first and second encrypted packets in the digital television signal to produce a multiple partially encrypted digital television signal [column 4 line 40 to column 6 line 57].

As to claims 2, 17 and 166, Hoffman discloses distributing the multiple partially encrypted digital television signal [column 9, lines 24-42].

As to claims 3, 18, 63, 75 and 167, Hoffman discloses that the packet type comprises a packet carrying information that is needed to decode the digital television signal [column 3, lines 20-54].

As to claims 4, 21, 34, 65, 77, 92, 106, 119, 141, 157 and 168, Hoffman discloses that the digital television signal complies with an MPEG standard [column 3, lines 55-64]. Hoffman discloses that the packet type comprises packets carrying a payload that comprises a packetized elementary stream (PES) header [column 3, lines 55-64].

As to claims 5, 22, 35, 44, 58, 78, 93, 107, 121, 146 and 169, Hoffman discloses that the digital television signal complies with the digital satellite service transport standard, and wherein

the packet type comprises packets carrying a payload of a packetized elementary stream header [column 3, lines 55-64].

As to claims 6, 23, 36, 45, 59, 70, 79, 94, 108, 122, 147, 162 and 170, Hoffman discloses that the packet type comprises video packets carrying a payload of a video sequence header [column 3, lines 20-54].

As to claims 9, 26 and 173, Hoffman discloses assigning a packet identifier to the unencrypted packets [column 7 line 35 to column 8 line 34].

As to claims 10, 27, 28 and 174, Hoffman discloses that the packet identifier comprises a primary packet identifier [column 7 line 35 to column 8 line 34]. Hoffman discloses assigning the primary packet identifier to the first encrypted packets and assigning a secondary packet identifier to the second encrypted packets [column 7 line 35 to column 8 line 34].

As to claims 11 and 175, Hoffman discloses that the packet identifier comprises a primary packet identifier [column 7 line 35 to column 8 line 34]. Hoffman discloses assigning the primary packet identifier to the second encrypted packets and assigning a secondary packet identifier to the first encrypted packets [column 7 line 35 to column 8 line 34].

As to claims 12, 29 and 40, Hoffman discloses an electronic storage medium storing instructions which, when executed on a programmed processor, carry out the method of encrypting a television signal [column 3, lines 20-54].

As to claims 13 and 30, Hoffman discloses an electronic transmission medium carrying an encrypted television signal encrypted by the method [column 3, lines 20-54].

As to claims 14, 19, 33, 50, 56, 64, 76, 91, 105, 118, 160 and 176, Hoffman discloses that the television signal is compressed [column 3, lines 55-64]. Hoffman discloses that the packet

Art Unit: 2131

type comprises a packet carrying information that is needed to decompress the television signal [column 3, lines 55-64].

As to claim 16, Hoffman discloses a method of encrypting a digital television signal, comprising:

examining unencrypted packets of data in the digital television signal to identify a packet type [column 4 line 40 to column 6 line 57];

encrypting packets identified as being of the packet type using a first encryption method to produce first encrypted packets [column 4 line 40 to column 6 line 57];

encrypting the packets identified as being of the packet type using a second encryption method to produce second encrypted packets [column 4 line 40 to column 6 line 57]; and

replacing the unencrypted packets of the packet type with the first encrypted packets and the second encrypted packets in the digital television signal to produce a partially multiple encrypted television signal [column 4 line 40 to column 6 line 57].

As to claims 20 and 178, Hoffman discloses that the packet type comprises packets carrying information used to access the digital television signal [column 4, lines 14-26].

As to claims 15 and 177, Hoffman discloses the method further comprising:

selecting packets according to a second selection criteria [column 6, lines 14-35];

duplicating the selected packets to create first and second duplicate packets [column 6, lines 14-35];

encrypting the first duplicate packets according to the first encryption method to create the first encrypted packets [column 6, lines 14-35]; and

encrypting the second duplicate packets according to the second encryption method to create the second encrypted packets [column 6, lines 14-35].

As to claim 31, Hoffman discloses a method of encrypting a digital television signal, comprising:

examining packets of data in the digital television signal to identify a packet type [column 4 line 40 to column 6 line 57];

encrypting packets identified as being of the packet type using a first encryption method to produce first encrypted packets [column 4 line 40 to column 6 line 57];

encrypting packets identified as being of the packet type using a second encryption method to produce second encrypted packets [column 4 line 40 to column 6 line 57]; and

distributing the digital television signal with first and second encrypted packets of the packet type along other packets that are unencrypted. [column 4 line 40 to column 6 line 57]

As to claim 32, Hoffman discloses that the encrypting under the first and second encryption methods comprises encrypting packets identified as packets that are needed to decode the digital television signal [column 4, lines 14-26].

As to claim 41, Hoffman discloses an encrypted television program, comprising:

a plurality of unencrypted packets [column 4 line 40 to column 6 line 57];

and

a plurality of encrypted packets, wherein the encrypted packets comprise at least a first encrypted packet encrypted under first encryption method and a second encrypted packet encrypted under a second encryption method [column 4 line 40 to column 6 line 57], and wherein the encrypted packets contain information required to decode the television program [column 4 line 40 to column 6 line 57].

As to claims 48, 54, 142, Hoffman discloses that the digital television program is encoded according to an MPEG standard [column 3, lines 55-64]. Hoffman discloses that the first encrypted packet of each of the plurality of encrypted packets and the unencrypted packets are identified by a primary packet identifier and the second encrypted packet of each of the plurality of encrypted packets are identified by a secondary packet identifier [column 7 line 35 to column 8 line 34].

As to claims 49, 55, 143, Hoffman discloses that the digital television program is encoded according to an MPEG standard [column 3, lines 55-64]. Hoffman discloses that the second encrypted packet of each of the plurality of encrypted packets and the unencrypted packets are identified by a primary packet identifier [column 7 line 35 to column 8 line 34].

Art Unit: 2131

Hoffman discloses that the first encrypted packet of each of the plurality of encrypted packets are identified by a secondary packet identifier [column 7 line 35 to column 8 line 34].

As to claim 51, Hoffman discloses a television set-top box, comprising:

- a receiver receiving a digital television signal comprising [column 4 line 40 to column 6 line 57]:

- a plurality of unencrypted packets [column 4 line 40 to column 6 line 57];
- and

- a plurality of encrypted packets, wherein the encrypted packets comprise at least a first encrypted packet encrypted under first encryption method and a second encrypted packet encrypted under a second encryption method [column 4 line 40 to column 6 line 57], and wherein the encrypted packets contain information required to decode the digital television signal [column 4 line 40 to column 6 line 57];

- a decrypter that decrypts either packets encrypted under the first or the second encryption method to produce decrypted packets [column 4 line 40 to column 6 line 57]; and

- a decoder that decodes the unencrypted packets and the decrypted packets to produce a signal suitable for play on a television set [column 4 line 40 to column 6 line 57].

As to claims 57, 145, 161, Hoffman discloses decompressing means for decompressing the compressed digital television signal.

As to claim 62, Hoffman discloses a method of decoding a multiple partially encrypted television signal, comprising:

receiving a digital television signal comprising a plurality of packets [column 4 line 40 to column 6 line 57], wherein certain packets of the plurality of packets are encrypted packets [column 4 line 40 to column 6 line 57], wherein the encrypted packets comprise at least a first encrypted packet encrypted under first encryption method and a second encrypted packet encrypted under a second encryption method, and a remainder of the packets are unencrypted [column 4 line 40 to column 6 line 57], wherein the encrypted packets contain information that is required for correct decoding of the television signal [column 4 line 40 to column 6 line 57];

decrypting a packet encrypted under one of the first and second encryption methods to produce decrypted packets [column 4 line 40 to column 6 line 57]; and

decoding the decrypted packets and the unencrypted packets to produce a decoded television signal [column 4 line 40 to column 6 line 57].

As to claim 66, Hoffman discloses an electronic storage medium storing instructions which, when executed on a programmed processor, carry out the method of decoding a television signal [column 4, lines 14-26].

As to claim 67, Hoffman discloses that the receiving, decrypting and decoding are carried out in a television device [column 3, lines 20-54].

As to claim 68, Hoffman discloses that the television device comprises a television set-top box [column 3, lines 20-54].

As to claims 69 and 93, Hoffman discloses that the partially encrypted television signal complies with the digital satellite service transport standard [column 3, lines 55-64]. Hoffman discloses that the encrypted packets carry a payload of a packetized elementary stream header [column 3, lines 55-64].

As to claim 73, Hoffman discloses a method of decrypting partially encrypted content, comprising:

receiving partially encrypted content comprising unencrypted content [column 4 line 40 to column 6 line 57], content encrypted under both a first encryption system and a second encryption system [column 4 line 40 to column 6 line 57], the encrypted content comprising information needed for correct decoding of the partially encrypted content [column 4 line 40 to column 6 line 57]; and

decrypting the encrypted content encrypted under the first encryption system to produce decrypted content [column 4 line 40 to column 6 line 57].

As to claim 74, Hoffman discloses decoding the unencrypted content and the decrypted content to decode the partially encrypted content [column 5 line 65 to column 6 line 13].

As to claim 82, Hoffman discloses an electronic storage medium storing instructions which, when executed on a programmed processor, carry out the method of decrypting [column 3, lines 20-54].

As to claims 83, 100, 114, Hoffman discloses that the receiving, and decrypting are carried out in a television device [column 3, lines 20-54].

As to claims 84, 101, 115, Hoffman discloses that the television device comprises a television set-top box [column 3, lines 20-54].

As to claims 85 and 98, Hoffman discloses that the receiving, and decrypting are carried out in an integrated circuit [column 3, lines 20-54].

As to claims 86, 99, 113, Hoffman discloses that the integrated circuit comprises one of an application specific integrated circuit and a field programmable gate array [column 3, lines 20-54].

As to claims 87, 112, Hoffman discloses that the receiving, and decrypting are carried out in a plurality of integrated circuits [column 3, lines 20-54].

As to claim 88, Hoffman discloses that the plurality of integrated circuit comprises at least one of an application specific integrated circuit and a field programmable gate array [column 3, lines 20-54].

As to claim 89, Hoffman discloses a method of decoding a partially encrypted television program, comprising:

receiving the partially encrypted television program comprising a plurality of clear packets [column 4 line 40 to column 6 line 57], a plurality of packets encrypted under a first encryption algorithm, and a plurality of packets encrypted under a second encryption algorithm [column 4 line 40 to column 6 line 57];

wherein the packets encrypted under the first and second encryption algorithms are packets that are needed for proper decoding of the television program [column 4 line 40 to column 6 line 57];

decrypting the packets encrypted under the first: encryption algorithm to produce decrypted packets [column 4 line 40 to column 6 line 57]; and

decoding the decrypted packets and the clear packets [column 4 line 40 to column 6 line 57].

As to claim 90, Hoffman discloses that the television program comprises a digital television program [column 3, lines 20-54].

As to claim 97, Hoffman discloses An electronic storage medium storing instructions which, when executed on a programmed processor, carry out the method of decoding a television signal [column 3, lines 20-54].

As to claim 102, Hoffman discloses a method of decrypting a partially encrypted television program, comprising:

receiving the partially encrypted television program comprising a plurality of clear packets, a plurality of packets encrypted under a first encryption algorithm [column 4 line 40 to column 6 line 57], and a plurality of packets encrypted under a second encryption algorithm [column 4 line 40 to column 6 line 57];

wherein the packets encrypted under the first and second encryption algorithms are packets that are needed to properly decode the television program [column 4 line 40 to column 6 line 57];

wherein the clear packets are identified by a first packet identifier [column 4 line 40 to column 6 line 57];

wherein the packets encrypted under the first encryption algorithm are identified by a second packet identifier (PID) [column 7 line 35 to column 8 line 34], and wherein the packets encrypted under the second encryption algorithm are identified by a third packet identifier (PID) [column 7 line 35 to column 8 line 34]; and

decrypting the packets encrypted under the first encryption algorithm to produce decrypted packets [column 4 line 40 to column 6 line 57].

As to claim 103, Hoffman discloses decoding the decrypted packets and the clear packets [column 3, lines 20-54].

As to claim 104, Hoffman discloses that the partially encrypted television program comprises a digital partially encrypted television program [column 3, lines 20-54].

As to claim 111, Hoffman discloses an electronic storage medium storing instructions which, when executed on a programmed processor, carry out the method of decrypting [column 3, lines 20-54].

As to claim 116, Hoffman discloses a method of multiple partial encrypting a packetized stream of information, comprising:

examining packets of data in the stream of information to identify a packet type, wherein the packet type is needed to decode the data stream [column 4 line 40 to column 6 line 57]; and

duplicating packets identified as being of the packet type to create first and second duplicate packets [column 4 line 40 to column 6 line 57];

encrypting the first duplicate packets according to a first encryption method to create first encrypted packets [column 4 line 40 to column 6 line 57]; and

encrypting the second duplicate packets according to a second encryption method to create second encrypted packets [column 4 line 40 to column 6 line 57].

As to claim 117, Hoffman discloses that the stream of information represents a television program and wherein each encrypting comprises encrypting packets identified as packets that are needed to decode the television program [column 7 line 44 to column 8 line 34].

As to claim 125, Hoffman discloses an electronic storage medium storing instructions which, when executed on a programmed processor, carry out the method of encrypting a packetized stream of information [column 4 line 40 to column 6 line 57].

As to claim 126, Hoffman discloses a method of manipulating packetized digital content, comprising:

examining unencrypted packets to identify a packet type [column 4 line 40 to column 6 line 57];

duplicating the packets identified as being of the packet type to produce first and second duplicate packets [column 4 line 40 to column 6 line 57]; and

inserting the first and second duplicate packets into the digital content to produce partially duplicated content having first and second duplicate packets instead of the identified packets [column 4 line 40 to column 6 line 57].

As to claim 127, Hoffman discloses identifying the first duplicate packets in the partially duplicated content and encrypting the first duplicate packets under a first encryption method to produce first encrypted duplicate packets [column 4 line 40 to column 6 line 57].

As to claim 128, Hoffman discloses inserting the first encrypted duplicated packets into the digital content in place of the first duplicate packets to produce partially encrypted content [column 4 line 40 to column 6 line 57].

As to claim 129, Hoffman discloses identifying the second duplicate packets and encrypting the second duplicate packets under a second encryption method to produce second encrypted duplicate packets [column 4 line 40 to column 6 line 57].

As to claim 130, Hoffman discloses inserting the second encrypted duplicate packets into the digital content in place of the second duplicate packets to produce partially dual encrypted content [column 4 line 40 to column 6 line 57].

As to claim 131, Hoffman discloses a method of manipulating packetized digital content, comprising:

examining unencrypted packets to identify a packet type [column 4 line 40 to column 6 line 57];

duplicating the packets identified as being of the packet type to produce first and second duplicate packets [column 4 line 40 to column 6 line 57];

encrypting the first and second duplicate packets [column 4 line 40 to column 6 line 57]; and

inserting the first and second encrypted packets into the digital content to produce partially encrypted content [column 4 line 40 to column 6 line 57].

As to claim 132, Hoffman discloses that the first and second duplicate packets are encrypted under first and second encryption algorithms [column 4 line 40 to column 6 line 57].

As to claim 133, Hoffman discloses a method of manipulating packetized digital content, comprising:

- examining unencrypted packets to identify a packet type [column 4 line 40 to column 6 line 57];

- duplicating the packets identified as being of the packet type to produce first and second duplicate packets [column 4 line 40 to column 6 line 57];

- encrypting the first duplicate packets under a first encryption method [column 4 line 40 to column 6 line 57];

- encrypting the second duplicate packets under a second encryption method [column 4 line 40 to column 6 line 57]; and

- inserting the encrypted first duplicate packets and encrypted second duplicate packets into the digital content to produce partially encrypted content [column 4 line 40 to column 6 line 57].

As to claim 134, Hoffman discloses a method of allowing multiple conditional access providers in a content delivery system, comprising:

- examining unencrypted packets of content to identify packets of a packet type [column 4 line 40 to column 6 line 57];

- encrypting packets of the packet type using a first encryption method used by a first conditional access provider to produce first encrypted packets [column 4 line 40 to column 6 line 57];

encrypting packets of the packet type using a second encryption method used by a second conditional access provider to produce second encrypted packets [column 4 line 40 to column 6 line 57];

replacing the packets of the packet type with the first and second encrypted packets to produce partially dual encrypted content; and

distributing the partially dual encrypted content in the content delivery system [column 4 line 40 to column 6 line 57].

As to claim 135, Hoffman discloses combining entitlement control messages for the first and second conditional access provider with the partially encrypted content [column 4 line 40 to column 6 line 57].

As to claim 136, Hoffman discloses a computer data signal embodied in a bit stream, comprising:

a segment of data representing an unencrypted packet [column 4 line 40 to column 6 line 57];

a segment of data representing a first duplicate packet encrypted under a first encryption method [column 4 line 40 to column 6 line 57]; and

a segment of data representing a second duplicate packet encrypted under a second encryption method [column 4 line 40 to column 6 line 57].

As to claim 137, Hoffman discloses that the segment of data representing an unencrypted packet, the segment of data representing a first duplicate packet encrypted under a first encryption method [column 4 line 40 to column 6 line 57], and the segment of data representing

Art Unit: 2131

a second duplicate packet are encrypted under a second encryption method all represent the same data [column 4 line 40 to column 6 line 57].

As to claim 138, Hoffman discloses that the segment of data representing an unencrypted packet represents a different data from the data represented by both the segment of data representing a first duplicate packet encrypted under a first encryption method [column 4 line 40 to column 6 line 57], and the segment of data representing a second duplicate packet are encrypted under a second encryption method [column 4 line 40 to column 6 line 57].

As to claim 139, Hoffman discloses a television receiver device, comprising:

- a receiver receiving a digital television signal comprising [column 4 line 40 to column 6 line 57]:

- a plurality of unencrypted packets [column 4 line 40 to column 6 line 57]; and

- a plurality of encrypted packets [column 4 line 40 to column 6 line 57], wherein the encrypted packets comprise at least first encrypted packets encrypted under first encryption method and second encrypted packets encrypted under a second encryption method [column 4 line 40 to column 6 line 57], and wherein the encrypted packets contain information used to decode the digital television signal [column 4 line 40 to column 6 line 57];

- a decrypter that decrypts at least one of the first and second encrypted packets [column 4 line 40 to column 6 line 57]; and

a decoder that decodes the unencrypted packets and the decrypted packets to produce a signal suitable for play on a television set [column 4 line 40 to column 6 line 57].

As to claim 144, Hoffman discloses that the digital television signal is compressed. Hoffman discloses that the encrypted packets comprises a packet type that is used to decompress the digital television signal [column 4 line 40 to column 6 line 57].

As to claim 148, Hoffman discloses a method of detecting and decrypting multiple carriage signals, wherein each carriage is partially encrypted, comprising:

receiving partially multiple encrypted content comprising unencrypted content [column 4 line 40 to column 6 line 57], and content encrypted under both a first encryption system and a second encryption system [column 4 line 40 to column 6 line 57];

detecting encrypted portions of the partially multiple encrypted content encrypted under the first encryption system [column 4 line 40 to column 6 line 57]; and

decrypting the encrypted content encrypted under the first encryption system to produce decrypted content [column 4 line 40 to column 6 line 57].

As to claims 149 and 151, Hoffman discloses decoding the unencrypted content and the decrypted content to decode the partially multiple encrypted content [column 4 line 40 to column 6 line 57].

As to claim 150, Hoffman discloses an apparatus for detecting and decrypting multiple carriage signals, wherein each carriage is partially encrypted, comprising:

means for receiving partially multiple encrypted content comprising unencrypted content [column 4 line 40 to column 6 line 57], and content encrypted under both a first encryption system and a second encryption system [column 4 line 40 to column 6 line 57];

means for detecting encrypted portions of the partially multiple encrypted content encrypted under the first encryption system [column 4 line 40 to column 6 line 57]; and

means for decrypting the encrypted content encrypted under the first encryption system to produce decrypted content [column 4 line 40 to column 6 line 57].

As to claim 152, Hoffman discloses a television set-top box, comprising:

means for receiving a partially multiple encrypted digital television signal comprising [column 4 line 40 to column 6 line 57]:

a plurality of unencrypted packets [column 4 line 40 to column 6 line 57]; and

a plurality of encrypted packets [column 4 line 40 to column 6 line 57], wherein the encrypted packets comprise at least first encrypted packets encrypted under first encryption method and second encrypted packets encrypted under a second encryption method [column 4 line 40 to column 6 line 57], and wherein the encrypted packets contain information

required to decode the digital television signal [column 4 line 40 to column 6 line 57];

means for decrypting at least one of the first and second encrypted packets [column 4 line 40 to column 6 line 57]; and

means for decoding the unencrypted packets and the decrypted packets to produce a signal suitable for play on a television set [column 4 line 40 to column 6 line 57].

As to claim 153, Hoffman discloses a television set-top box for detecting multiple carriage signals and decrypting based upon detection, comprising:

means for receiving a partially multiple encrypted digital television signal comprising [column 4 line 40 to column 6 line 57]:

a plurality of unencrypted packets [column 4 line 40 to column 6 line 57]; and

a plurality of encrypted packets [column 4 line 40 to column 6 line 57], wherein the encrypted packets comprise at least first encrypted packets encrypted under first encryption method and second encrypted packets encrypted under a second encryption method [column 4 line 40 to column 6 line 57], and wherein the encrypted packets contain information used to decode the digital television signal [column 4 line 40 to column 6 line 57];

means for detecting encrypted portions of the partially multiple encrypted digital television signal encrypted under the first encryption method [column 4 line 40 to column 6 line 57]; and

means for decrypting at least one the first and second encrypted packets [column 4 line 40 to column 6 line 57].

As to claim 154, Hoffman discloses a television set-top box for detecting multiple carriage signals and decrypting based upon detection, comprising:

a receiver receiving a digital television signal comprising [column 4 line 40 to column 6 line 57]:

a plurality of unencrypted packets[column 4 line 40 to column 6 line 57]; and

a plurality of encrypted packets, wherein the encrypted packets comprise at least a first encrypted packet encrypted under first encryption method and a second encrypted packet encrypted under a second encryption method [column 4 line 40 to column 6 line 57], and wherein the encrypted packets contain information used to decode the digital television signal [column 4 line 40 to column 6 line 57]; and

a decrypter that decrypts at least one the first and second encrypted packets [column 4 line 40 to column 6 line 57].

As to claim 155, Hoffman discloses the television set-top box, further comprising:

a decoder that decodes the unencrypted packets and the decrypted packets to produce a signal suitable for play on a television set.

As to claim 158, Hoffman discloses that the digital television signal complies with an MPEG standard [column 3, lines 55-64]. Hoffman discloses that the first encrypted packet of each of the plurality of encrypted packets and the unencrypted packets are identified by a primary packet identifier and the second encrypted packet of each of the plurality of encrypted packets are identified by a secondary packet identifier [column 7 line 35 to column 8 line 34].

As to claim 159, Hoffman discloses that the digital television signal complies with an MPEG standard [column 3, lines 55-64]. Hoffman discloses that the second encrypted packet of each of the plurality of encrypted packets and the unencrypted packets are identified by a primary packet identifier. Hoffman discloses that the first encrypted packet of each of the plurality of encrypted packets are identified by a secondary packet identifier [column 7 line 35 to column 8 line 34].

As to claim 165, Hoffman discloses a method of encrypting a digital television signal, comprising:

- examining unencrypted packets of data in the digital television signal to identify a packet type [column 4 line 40 to column 6 line 57];

- duplicating packets identified as being of the packet type to create first and second duplicate packets [column 4 line 40 to column 6 line 57];

- encrypting the first duplicate packets according to a first encryption method to create first encrypted packets [column 4 line 40 to column 6 line 57];

- encrypting the second duplicate packets according to a second encryption method to create second encrypted packets [column 4 line 40 to column 6 line 57]; and

replacing the unencrypted packets of the packet type with the first and second encrypted packets in the digital television signal to produce a multiple partially encrypted digital television signal [column 4 line 40 to column 6 line 57].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 24, 37, 46, 60, 71, 80, 95, 109, 123, 163 and 171 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman U.S. Patent No. 6,324,288 B1 as applied to claims 1, 16, 31, 41, 51, 62, 73, 89, 102, 116, 154 and 165 above, and further in view of Harumoto et al U.S. Patent No. 6,754,276 B1.

As to claims 7, 24, 37, 46, 60, 71, 80, 95, 109, 123, 163 and 171, Hoffman does not teach that the packet type comprises video packets carrying a payload of a group of pictures header.

Harumoto et al teaches a packet that comprises video packets carrying a payload of a group of pictures header [column 12, lines 44-62].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman so that video packets would have carried a payload of a group of pictures header.

Art Unit: 2131

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman by the teaching of Harumoto et al because it achieves a system that which easily and surely conforms to a one-second rule [column 7, lines 26-28].

7. Claims 8, 25, 38, 47, 61, 72, 81, 96, 110, 124, 164 and 172 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman U.S. Patent No. 6,324,288 B1 as applied to claims 1, 16, 31, 41, 51, 62, 73, 89, 102, 116, 154 and 165 above, and further in view of Darr, Jr. et al U.S. Patent No. 5,583,863 (hereinafter Darr).

As to claims 8, 25, 38, 47, 61, 72, 81, 96, 110, 124, 164 and 172, Hoffman does not teach that the packet type comprises video packets carrying a payload of closed captioning information.

Darr teaches a packet carrying a payload of closed captioning information [column 18 line 57 to column 19 line 21].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman so that the video packets would have carried a payload of closed captioning information.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman by the teaching of Darr because it produces a full service digital broadband network that provides efficient transmission of DS-3 ATM cell streams [column 19, lines 21-34].

Art Unit: 2131

8. Claims 39 and 120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman U.S. Patent No. 6,324,288 B1 as applied to claims 31 and 116 above, and further in view of Monroe et al US 2002/0097322 A1.

As to claims 39 and 120, Hoffman teaches that the digital television signal complies with an MPEG standard, as discussed above.

Hoffman does not teach that the packet type is identified as a packet containing MPEG 1-picture packets.

Monroe et al teaches a packet that conforms to the MPEG-1 standard and its benefits [0083].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman so that the MPEG digital television signal packets would have complied with the MPEG-1 standard.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman by the teaching of Monroe et al because the use of MPEG-1 streams is advantageous due to the low cost of the encoder hardware and the ubiquity of software MPEG-1 players [0062].

Art Unit: 2131

9. Claims 42, 52, 140 and 156 rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman U.S. Patent No. 6,324,288 B1 as applied to claims 41, 51, 139 and 154 above, and further in view of Misu US 2002/0047915 A1.

As to claims 42, 52, 140 and 156, Hoffman does not teach that the unencrypted packets and encrypted packets comprise transport stream packets.

Misu teaches packets that comprise transport stream packets and the benefits of their use [0063-0065].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman so that the unencrypted and encrypted packets would have comprised transport stream packets.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Hoffman by the teaching of Misu because the transport stream packets can be easily carried out within specified intervals without loss of data at high speed, thereby makes it possible using software and reduces hardware thereby chip size and large-scale cost is reduced.


As to claims 43 and 53, Hoffman teaches that the encrypted transport stream packets comprise packets containing MPEG packetized elementary stream (PES) headers, as discussed above.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K. Moorthy whose telephone number is 571-272-3793. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Aravind K Moorthy 
June 22, 2006


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100